

ARAC ESHWG REPORT 25.1355 (c)

1 - What is underlying safety issue addressed by the FAR/JAR?

The FAR/JAR gives requirements relating to the arrangement, protection and control of the electrical feeders from the busbars to the distribution points. The divisions of loads among the feeders shall be such that no single fault occurring in any feeder or associated control circuit will hazard the aeroplane.

2 - What are the current FAR and JAR standards?

Current FAR text:

Section 25.1355(c)

- (c) If two independent sources of electrical power for particular equipment or systems are required by this chapter, in the event of the failure of one power source for such equipment or system, another power source (including its separate feeder) must be automatically provided or be manually selectable to maintain equipment or system operation.

Current JAR text:

JAR 25.1355(c)

- (c) If two independent sources of electrical power for particular equipment or systems are required by this JAR-25, in the event of the failure of one power source for such equipment or system, another power source (including its separate feeder) must be automatically provided or be manually selectable to maintain equipment or system operation. (See ACJ 25.1355 (c) and ACJ No. 6 to JAR 25.1309.)

3 - What are the differences in the standards and what do these differences result in?

The FAR refers to "chapter" while the JAR refers to "JAR 25" in the rule text. The FAR reference to "chapter" implies broader coverage. The JAR also refers to advisory material.

4 - What, if any, are the differences in the means of compliance?

There are no differences in the means of compliance, however the JAR has specific ACJ's as follows: The ACJ to JAR 25.1355(c) introduced Interpretative Material concerning the segregation of electrical feeders to minimize the possibility of cascade or multiple failures. In addition, ACJ No. 6 to JAR 25.1309 refers to the same objective but in relation to the installation of the equipment and systems rather than the electrical feeders only. Segregation of electrical cable bundles or groups of hydraulic pipes being examples that are explicitly quoted.

5 - What is the proposed action?

In line with the fast track harmonization process, the FAR with text changes identified in Item 6 is to be adopted.

6 - What should the harmonized standard be?

FAR/JAR 25.1355(c)

If two independent sources of electrical power for particular equipment or systems are required for certification or by operating rules, in the event of the failure of one power source for such equipment or system, another power source (including its separate feeder) must be automatically provided or be manually selectable to maintain equipment or system operation.

(See ACJ 25.1355 (c) and ACJ No. 6 to JAR 25.1309.) This reference applies to JAR only.

Note: ACJ No 6 to 25.1309 is likely to become ACJ 25.1310(a) if the proposed adoption of FAR/JAR 25.1310 takes place.

7 - How does this proposed standard address the underlying safety issue (identified under #1)?

Regulation remains unchanged.

8 - Relative to the current FAR, does the proposed standard increase, decrease, or maintain the same level of safety? Explain.

The level of safety is maintained whilst providing clarification in the form of acceptable means of compliance.

9 - Relative to current industry practice, does the proposed standard increase, decrease, or maintain the same level of safety? Explain.

The level of safety is maintained whilst providing clarification in the form of acceptable means of compliance.

10 - What other options have been considered and why were they not selected?

Adoption of JAR was considered, however for reasons as stated above, the FAR text was selected together with JAR Interpretative material.

11 - Who would be affected by the proposed change?

As proposal is in line with current design practices, there should be minimal effect on operators or manufacturers.

12 - To ensure harmonization, what current advisory material (e.g., ACJ, AMJ, AC, policy letters) needs to be included in the rule text or preamble?

None.

13 - Is existing FAA advisory material adequate? If not, what advisory material should be adopted?

As no equivalent Advisory Material exists, it is recommended that the current ACJ to JAR 25.1355(c) and ACJ No 6 to JAR 25.1309 be retained and adopted as FAA advisory material.

14 - How does the proposed standard compare to the current ICAO standard?

This proposal is in line with ICAO Annex 8 Chapter 8 Electrical Systems..

15 - Does the proposed standard affect other HWG's?

No.

16 - What is the cost impact of complying with the proposed standard?

As the proposal is in line with existing regulations and current design practice, the cost impact will be negligible.

17 - Does the HWG want to review the draft NPRM at "Phase 4" prior to publication in the Federal Register?

Yes.

18 - In light of the information provided in this report, does the HWG consider that the "Fast Track" process is appropriate for this rulemaking project, or is the project too complex or controversial for the Fast Track Process. Explain.

The ESHWG considers that the fast track harmonisation process is appropriate for this rule.